



OFFICE MEMORANDUM

DATE: January 10, 1997

TO: District Engineers
District Field Engineers
District Construction Engineers
Resident/Project Engineers
District Materials Engineers
District Materials Supervisors

FROM: Paul F. Miller
Engineer of Construction

Calvin Roberts
Engineer of Materials and Technology

**SUBJECT: JOINT CONSTRUCTION AND MATERIALS AND TECHNOLOGY
INSTRUCTIONAL MEMORANDUM 1997 - B
Interim Procedure for Acceptance of Aluminum Sheet for Permanent Signs**

Until further notice, the basis of acceptance for aluminum sheet (blanks) used for fabrication of permanent Type III and IV signs to be installed on MDOT projects shall be tested stock with project-specific verification testing. This interim procedure supersedes the sampling and testing requirements of the Materials Sampling Guide for aluminum sheet. This Joint Instructional Memorandum does not apply to extruded aluminum panel signs.

Sign Fabricator Tested Stock Procedure

The sign fabricator must agree in writing to abide by the tested stock procedures contained in the Materials Quality Assurance Manual (with the exception of Section 3 - Application for Tested Stock Privileges) as modified by the following specific requirements.

- Aluminum blanks used in fabricating permanent signs for use on MDOT projects shall be sampled in the sign fabricator's shop by an MDOT representative at the frequency shown in the table below.
- Copies of mill certifications supplied by the aluminum blank distributor for the material to be placed in tested stock shall be provided by the fabricator at the time the samples are collected. These mill certifications must be submitted with the sample ID.

- All pallets, piles, stacks, etc., of aluminum blanks approved for use on MDOT projects shall be identified by the fabricator in a manner which will reduce the likelihood of fabricating MDOT signs using untested or non-specification blanks.

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- M & T central laboratory personnel will randomly select and test the mechanical properties (tensile strength, thickness, elongation) of 50% of the blanks sampled. Blanks not selected for testing at this point will be held by M & T in case of failing tests.
- Fabricators will receive copies of all test results. The laboratory test report numbers shall be included in the fabricator's inventory records and on all required project documentation.
- All aluminum sheet for permanent Type III and IV signs shipped under this interim procedure shall be documented using Form 1922, "Shipment of Tested Stock Report".

Acceptance Criteria

If all of the first 50 percent of the blanks initially selected by M&T for testing meet specifications, the material will be accepted for use as tested stock.

If any of the first 50 percent of the blanks initially selected for testing fails to meet specifications, the second 50 percent of the blanks will be tested. If any blanks in this second set fail to meet specifications, all test results will be reviewed and a determination will be made as to the need for chemical analysis of the aluminum material. If chemical analysis is required, it will be performed by an independent laboratory selected by M&T.

Once testing is complete, all test results will be evaluated and a determination will be made by M&T to accept or reject the material for use as Tested Stock. If the material is rejected for use as Tested Stock, the fabricator shall describe in writing the steps to be taken to ensure the failed material will not be used on MDOT projects. These actions shall be approved by M&T and a new stock of aluminum blanks shall be tested and approved for use prior to proceeding with fabrication of signs for MDOT projects.

Delay due to the need for additional testing will not be cause for claims for extra compensation by the Contractor.

Sample Size

The sample size will be based on the number of different sizes of aluminum blanks intended to be placed in tested stock as shown in the table below. The MDOT representative will randomly select the specific

sizes to be sampled and, for each of those sizes, randomly select one blank for testing. For example, if 30 different size blanks are to be placed in tested stock, four different sizes must be sampled. One blank is then selected at random to represent each of those four sizes.

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Sample Size for Aluminum Sign Blanks	
Number of Blank Sizes	Total Sample Size
<20	2
20-30	4
31-50	6
>50	8

Project Specific Verification Sampling

On all projects which include more than 500 square feet of signs from one fabricator, verification samples will be randomly selected by the Engineer from the project site for testing. If a verification sample fails mechanical tests conducted by the M & T Central Laboratory, chemical composition will be tested at the Contractor's expense by an independent laboratory selected by MDOT. The contractor shall be responsible for replacing the sign selected for verification testing.

Results of this verification testing shall be treated in accordance with Section C-6 (Certification Verification Sampling and Testing - Revised 05/02/94) of the Materials Quality Assurance Manual.

On all projects which include less than 500 square feet of signs from one fabricator, the contractor shall certify in writing that materials meet all materials specifications of the 1996 Standard Specifications for Construction. This certification shall be submitted to the Engineer at the time the signs are installed.

Engineer of Construction

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